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RELATIONSHIPS BETWEEN PERCEPTUAL AND COGNITIVE DEVELOPMENT.

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THE PROBLEM OF THE RESEARCH WAS TO STUDY THE RELATIONSHIP BETWEEN PERCEPTION AND COGNITION FACTORS IN THE GROWING CHILD. A CENTRAL TASK WAS TO DEVELOP AN INSTRUMENT FOR ASSESSING THE DEVELOPMENT OF SIZE CONSTANCY IN A PROCEDURE IN WHICH THE EFFECTS OF COGNITIVE ACTIVITY COULD BE EITHER CONTROLLED OR EVALUATED. USING A NUMBER OF CONSIDERATIONS, THE RESEARCHERS PLACED A STANDARD STIMULUS AT 14 FEET FROM THE SUBJECT AND A COMPARISON STIMULUS AT 4 FEET FROM THE SUBJECT. AS STANDARD STIMULI, POSITIONS NUMBERING FOUR AND SIX IN A NINE STIMULUS SERIES WERE SELECTED. TWO DIFFERENT STANDARDS WERE SELECTED SO AS TO COMPARE THE EFFECT OF SIZE ON POSITION-IN-THE-SERIES OF THE STANDARD ON JUDGMENTS OF THE COMPARISON STIMULI. PIAGET'S CONCENTRIC METHOD AS A VERSION OF CONSTANT STIMULI WAS USED. SIZE OF FEASIBLE APPARATUS TO HANDLE NINE THREE-DIMENSIONAL STIMULI CONTRIBUTED TO A DECISION ABOUT THE SIZE OF THE STIMULI. BOXES SERVED AS THE STIMULI. SLIDES WERE PREPARED AS PART OF THE STUDY OF THE COMPARISON BETWEEN TWO-VERSUS THREE-DIMENSIONAL STIMULI. SIGNIFICANT DIFFERENCES WERE FOUND BETWEEN TWO-DIMENSIONAL STIMULI AND THREE-DIMENSIONAL STIMULI WITH BOTH WEIGHTED AND SIMPLE SCORES. THE DATA WERE OBTAINED FROM 13 ADULTS AND ONLY ONE CHILD. (JC)

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1. Problem on which the research was focused

The concern from which this work originated was that of the relationship between perception and cognition as these factors develop in the growing child. While each of these has separately been the subject for considerable investigation and theoretical links have been suggested between the two, there has been very little, if any, systematic empirical investigation of how these two factors evolve in relation to each other in the same child. While a longitudinal study of the evolving relationship between these variables is highly desirable, such a study is dependent upon the availability of adequate procedures and techniques to study these functions across a relatively broad age range. The present proposal was designed to develop the instruments for just such a study. In particular, we focused upon the procedure for studying the development of perception i.e., the development of size constancy.

2. Objectives

a. Our central task was to develop an instrument for assessing the development of size constancy in a procedure in which the effects of cognitive activity could be either controlled or evaluated. The sample we proposed to study was to have been made up of children ranging in age from three to six years. The use of this age group involves some special problems. These include a relatively short attention span (and devising procedures to extend it) as well as unstable understanding and use of language. This latter factor contributes to instability of response beyond intrinsic variability or instability

of perceptual function. Since our quest was for a sensitive measuring procedure it became our task to evaluate the relationship of a number of variables (to be cited shortly) to stability of responding across and within sessions.

Thus we proposed to consider the relevance of various factors such as stimulus attributes (e.g., familiarity, abstractness), procedure for stimulus presentation (e.g., concentric method, method of limits), and procedure of responding (e.g., pointing, pushing a key, understanding verbal concepts involved) as possibly related to sensitivity, internal consistency, and stability over time. The development of such an instrument in a series of cross sectional samples would permit future, more careful examination of longitudinal issues.

b. In the service of the foregoing and as an independent objective we were concerned as one step with the design of an apparatus which would allow a precise estimate of the degree of constancy while in addition meeting the following requirements:

(1) allow straightforward comparison of different psychophysical methods of stimulus presentation such as method of limits, method of constant stimuli, Piaget's concentric method.

(2) provide automatic remote control over stimulus presentation to keep experimenter and size cues out of the S's visual field.

(3) allow juxtaposition of standard from near to far positions without intruding experimenter into visual field.

(4) provide automatic response recording.

(5) allow comparison of two and three dimensional stimuli

(6) allow flexibility in varying three dimensional stimuli used such that the effects of various stimulus attributes may be evaluated-- abstract vs. meaningful, familiar vs. unfamiliar, large vs. small, etc.

An apparatus which meets all of the above specifications has recently been completed and is now in use.* We had not entirely foreseen the cost of such an apparatus in expense, time or the problems that are entailed in the above specifications. A detailed description of the apparatus is found in the Procedure section of this report with diagrams of the set up.

3. Related Literature

Research on size constancy with children has shown it to be a phenomenon which changes systematically with age (Beyrl, 1926; Cohen, et al 1958; Wohlwill, 1960; Wohlwill, 1963). In crude, general terms, children can be described as underconstant and adults as overconstant, perfect constancy being reached around age 7. This generalization seems to be supported despite large differences in testing procedures and the paucity of data for subjects younger than five. These procedures have varied in the following ways: Method of presentation of stimuli (single stimuli, Cruikshank, 1941; stimulus preference, Misumi, 1951; constant stimuli, Beyrl, 1926; method of limits, Lambercier, 1946): near and far position of the standard (Cohen, et al 1958, Beyrl, 1926; Zeigler and Leibowitz, 1959) and type of stimuli used (meaningful, Cruikshank, 1941; geometric figures, Lambercier, 1946). In none of these aforementioned variables are the results consistent, the direction of the effect uniform,or a sufficiently wide range of ages studie to enable us to draw a clear conclusion about the effect of age. In addition, Wohlwill (1963) has emphasized, in his review, the critical

*We would like to acknowledge the aid of Mr. B Tursky in desigining and constructing the equipment. In addition we thank Boston University Graduate School for making available additional funds beyond the present grant to make possible the construction of this apparatus.

role of instructions in orienting subjects to judge for retinal, phenomenal, or objective size. Unless studies are comparable in their instructions, one must be cautious in evaluating their equivalence. There has been little effort to condition human subjects to respond on a non-verbal basis, such as Kluver (1933) employed in his study of size constancy (discrimination) in monkeys.

Few, if any, studies have attempted to correlate the development of size constancy with the development of other perceptual or cognitive abilities. Similarly all the studies cited which show changes in size constancy with age have been cross-sectional in design rather than longitudinal. Wohlwill (1963) points up the potential contribution of research which would incorporate both these latter strategies.

4. Procedure

a. Purpose--It was our purpose to devise a set of procedures for the study of size constancy in children, such that we would have the flexibility to compare different procedures for their effect on constancy and in addition to maximize the likelihood of constancy appearing in very young children.

The relevant literature suggests that there are several factors which ought to be taken account of in any new research design on size constancy. For example, should the series be ascending, descending or concentric? Where should the standard be set? Should the response be verbal or gestural? How large should the stimuli be? Should stimuli be familiar or unfamiliar, three or two-dimensional, actual object or picture, meaningful or abstract, liked or disliked?

Our strategy was first to manipulate the number of dimensions presented to the subject. Both the Gibson and Wohlwill reviews suggested, as we independently

believed, that three-dimensional size constancy should be explored using real world three-dimensional objects. However, we recognized that an apparatus for displaying 3-D objects might be more cumbersone than a simple slide projector. We therefore attempted first to compare subjects responses to a display of three-dimensional stimuli with responses to a two-dimensional display (matched photos of the 3-D stimuli).

If we once had seen which procedure, 3-D or 2-D, was less variable (within and across trials) we hoped to proceed to the issue of familiarity or non-familiarity of stimuli. Familiar stimuli would be blocks, flower pots and dolls, while unfamiliar stimuli might possibly be such objects as wrenches, machines, screws.

Since we hoped to find the most appropriate procedure to measure size constancy in very young subjects we also planned to vary response techniques. Subjects were to be given an opportunity to identify the "bigger" box, e.g., by pointing, verbalization, or by hitting the appropriate square on a 2-panel response counter. Stability of response, ease of administration of the task and subjects ability to judge were also criteria for evaluating and choosing the method to be used.

In addition, since there are no reliability data available, we planned to test some subjects every day for several consecutive days to see the effect of over-learning, and to see the stability and fluctuation of responses over sessions. From these considerations we made a variety of decisions. We placed the standard stimulus in the far position at 14 feet from the subject while the comparison stimulus was placed in the near position at 4 feet from the subject. Previous work done at Geneva cited by Wohlwill (1963) showed that this arrangement led to an increase in constancy. The choice of distances was determined

by practical considerations and the expectation that the retinal angle subtended by the stimulus sizes we were using would in general differ by . jnd's between the two distances. (We also wanted to remain within distances that would be easy to obtain in nursery school settings.) As standard stimuli we selected positions numbered 4 and 6 in a 9 stimulus series. We selected two different standards so as to compare the effect of size or position-in-the-series of the standard, on judgments of the comparison stimuli. It was decided to use Piaget's concentric method as a version of a constant stimuli method. The constant stimuli procedure was dictated by apparatus considerations in the remote presentation of three-dimensional stimuli having a limited number of positions available. Similar considerations led to the decision to restrict the range of stimuli to nine. Restrict the stimulus series in order to limit the time necessary for testing due to limitations in attention span of young subjects. Size of feasible apparatus to handle nine three-dimensional stimuli partially contributed to the decision about the size of the nine stimuli. These were boxes which ranged in size from 1 7/8" to 5 1/4" on a side in approximately equal steps of 3/8".

The decision to use boxes as stimuli was governed by the fact that they are a) familiar b) of no known size c) simple to obtain, arrange and mount. We obtained two sets (standards and comparisons) of size-graduated cardboard boxes covered in a uniform, light green paper. Then, as part of the study of the comparison between two versus three-dimensional stimuli, we arranged for slides to be made. They were designed to reproduce as exactly as possible the conditions under which the boxes were to be seen. The photographs were made while the boxes were mounted from an angle approximating the angle at which the child would see the three-dimensional boxes. These two matching versions

of the stimuli were designed to permit as close as possible a comparison of constancy for two- versus three-dimensional stimuli. Five sets of these slides were made in order to have available in a simple forward sequence, four sets for presentation as comparison stimuli in the near position and one set in the far position as standard stimuli.

The slides are mounted in trays in Kodak Carousel slide projectors which are fixed at an exact three feet behind a screen made to appear like a TV screen to hold the child's interest as in a game. These projectors presented the slides at exactly six inches further from the subject than the boxes in both the near and far positions.

b. Apparatus--Figure 1 shows the arrangement of the equipment. To the child the experimental apparatus appears as two pseudo-TV sets, one near and one far. The stimuli, mounted at an angle, appear on or just in front of the "TV sets," one on each "screen" at a time. There is only an inch or so of lateral displacement between the two "TV sets" so that both appear to be almost directly in front of the child. In the case of the two-dimensional stimuli (slides, Fig. 1, P. 24), the stimulus is projected from behind the screen (and thus the projector cannot be seen by the subject) onto a 12" x 15" ground glass screen placed where a normal TV screen would be.

In the case of the three-dimensional stimuli, the boxes, (Fig. 2, P. 25) two mechanized vertical conveyor belts have been constructed to which the boxes have been attached on spokes. Fig. 3, P. 26 illustrates this arrangement. Two 39" x 24½" x 10½" gray conveyor displays contain the motors and serve to hide the stimuli when they are not being judged. The stimuli are carried in the apparatus so that only one stimulus target is visible at any one time. This apparatus

is placed in front of each of the "TV screens." The boxes rise out of the base and stop in the center of the screen. A neutral density filter slide is projected onto the screen behind the box stimulus, providing a background similar to that used with the slides and helping to block out background cues. The standard and comparison apparatuses are the same in every respect except that the motor for the standard can rotate the boxes in only one direction.

Both slide projectors and the conveyor display apparatuses which move the boxes can be advanced or reversed from a control board on the experimenter's lap. The subject has a simpler response panel containing two differently colored buttons. The subject may press one of the buttons to indicate which box is larger (see Procedure). The panel may also be set so that pressing one button moves the comparison and pressing the other moves the stimulus one step backward. It may also be set simply to indicate that the response has been made and counted. The subject's response panel operates through the experimenter's control board, and a dial on the experimenter's board records the responses. This enables the experimenter to sit behind the subject, thus helping further to avoid any size cues in S's visual field.

c. Conditions of testing--The subject is brought for testing into a room relatively bare of background size cues. The experimenter attempts to establish rapport during a brief conversation period, and then proceeds with the pretest. To be sure that the child has the concept of "bigger than" he is asked to identify the larger of each of three pairs of toys (a large and small ball, etc.). The response "bigger" is asked for because other work has indicated that the naming of this concept is acquired before the naming of "smaller" and "equal." (Shedd, 1958) If the child passes the pretest, he is asked to

indicate which of the two boxes appearing in the "TV sets" is the "bigger" and the experimenter records his response.

If the subject fails the pretest, he is excluded from the study. We recognize that such a decision may prejudge the issue of whether or not young children who are not adequate verbally have size constancy. Nonetheless, in the absence of a non-verbal conditioning procedure (too elaborate for our present purposes), this is the most feasible operational choice at this stage of our research. If we find all our subjects showing clear constancy, suggesting that constancy is related to verbal development, the conditioning procedure may then become more urgent.

A word about our choice of instructions is in order. Our instructions call for a judgment of "real" size. They do not relate simply to any of Wohlwill's categories, but seem to conform most closely to what he calls "objective" instructions. However, his instructional procedures are verbally elaborate, are used for adults and appear excessively complex for children at this age level.

We are running a pilot study to determine the best response technique for the age group of three to five. The possibilities we are testing are 1) asking the child to point to the larger box, the subject response panel would not be used, and the experimenter would have to observe the response 2) asking the child to point to the larger box and then allowing him to push a button to advance the stimulus and 3) with slight modifications, the child could be asked to press the buttons on the same side as the larger box. It is thought that pushing the buttons will attract the child's interest more than pointing, as well as making it easier for the experimenter to record responses. Choice number three might be too hard for the child to understand, although preliminary

data suggests that this is not the case.

For the first half of each session the standard far stimulus remains constant while the near comparison stimulus is rotated twice through the entire series of nine. In the case of three-dimensional stimuli the boxes are arranged on the belt so that they appear in an order which is Wohlwill's modification of Piaget's concentric order. For the stimuli numbered in size from 1 to 9, the comparison stimulus order is 9, 1, 2, 8, 7, 3, 4, 6, 5,5 , 6, 4, 3, 7, 8, 2, 1, 9 (after box 5 appears the first time, the belt is advanced half way and than the rotation is reversed). This order gives two separate runs with the "anchor points" at the start of the sequence, namely the extremes of the series. After the first half of the session, while distracting the child, the experimenter changes to the second standard by remote control, and runs through the entire series, from 9 to 9 again. Remote control is used so that the experimenter avoids entering the field and giving additional size cues. Each child is tested with both standards in each session. Procedure for the slide presentation is identical except that rather than reversing as with the three-dimensional boxes, the experimenter advances through the four sets of slides.

d. Subjects--The delays in apparatus construction and the need to pretest apparatus effectiveness and procedure led us to obtain our preliminary data from adults--college students. This was done largely because of their more ready availability and our lack of readiness to go to nursery schools with apparatus issues unresolved. We have run a small handful of children, age approximately 3 and 4, but not in any sufficient number in a sufficiently reliable way (from an apparatus point of view) to warrant any generalizations.

5. Analysis of the Data

a. Technique of Data Analysis. Because of our concerns with variability within and across sessions and from a long range point of view with longitudinal comparisons, it is necessary to develop a data analysis technique which can yield a measure for each subject in each session of both accuracy and variability of judgment. While we recognize that these two facets of perceptual behavior may not be entirely independent of one another, from a developmental concern, development in one function may well differ from development in the other. Thus, while we used Wohlwill's concentric method of stimulus presentation, his scoring scheme, which yielded only accuracy values seemed limited for our purposes. We have instead been exploring possible ways of reflecting both accuracy and variability and plan a detailed review of this question in our subsequent work.

For group data, or cross-sectional research, where one treats each subject as a replication of another, the data for all subjects can be combined. This yields a sufficient number of trials to cumulate percentages of a given judgment at each stimulus size and these can then be plotted on normal probability paper. From such a plot, one can then obtain 1) a 50 per cent or threshold value which indicates accuracy by its deviation from the standard and 2) a variability estimate by reading the value for the difference between 50 percent and 34 per cent (one sigma) of the distribution. (See page 32-35)

For individual data, our long range concern, this method is limited in value. We have thus been considering the following approaches. The first two of these approaches are similar. In the first, we establish the basis for an accuracy judgment by saying that all stimuli larger than the standard should be judged as larger, all smaller than the standard judged as smaller and the equal

size stimulus should 50 per cent of the time be judged as larger and 50 per cent as smaller. On this basis, any judgment deviating from this criterion is scored as an error. This yields a number of errors score (simple error score) which ignores the magnitude of the error (i.e., the size of the stimulus judged incorrectly in comparison to the standard size). This score is essentially a variability score in that it does not thus weight the accuracy issue.

In the second approach, we begin the same way but weight the error by a factor reflecting its distance from the standard (weighted error score). For example, in the following array with six as the standard we would obtain an error score of one and a weighted error score of five.

Stimulus No.	1	2	3	4	5	6	7	8	9
	±	+	+	+	+	−	−	−	−
	+	+	+	+	+	+	−	−	−
Weights	6	5	4	3	2	1	2	3	4

(50% larger & 50% smaller)

These approaches to data analysis are tentative and exploratory. We propose to examine others, but for our present purposes in this report, we shall focus on these as the tools for data analysis.

b. Results--There were four conditions consisting of (1) two- and three-dimensional stimuli and (2) two different size standards-numbers four and six. Fourteen adult subjects completed all four conditions. All 14 were run in the same order: both sets of three-dimensional stimuli came before the two-dimensional, and standard 4 came before standard 6 in each case. It seems probable that there are sequential position effects, and as our pilot procedure did not control for this, the results must be interpreted cautiously.

The mean weighted and simple errors for each of the four conditions are given in Table 1. In general, both kinds of errors increased as the testing session continued. A series of Wilcoxon matched-pairs signed-ranks tests was used to analyze the data with a .05 level of significance as the criterion.

Significant differences were found between two-dimensional stimuli and three-dimensional stimuli with both weighted and simple scores, whether standard 4 or standard 6 was used. Two-dimensional stimuli always produced more errors than three-dimensional stimuli. Significant differences were also found in both scores (weighted and simple) between scores for standard 4 and scores for standard 6 under both two- and three-dimensional conditions tested separately. Standard 6 produced more errors than standard 4 (this had not been predicted beforehand so a two-tailed test was used). The only difference which was not significant at the minimum .05 level was the difference between the weighted scores using the three-dimensional versions of standard 4 and standard 6 and this one barely missed.. The various differences and their levels of significance are shown in Table 2.

This table also shows that the graphic method of analysis described earlier yields essentially similar results except for one comparison. It may be that the analysis here proposed is one which is more sensitive to differences in performance.

Three of the 14 subjects were run three times on three consecutive days to check stability of performance. With so small an N these data are, of course, inconclusive, but they do not suggest any trend towards either more or less accuracy over time. By inspection, the test-retest reliability seems satisfactory so far although the data are severely limited. Table 3 shows the weighted and simple error scores for the three days.

One child has completed the experiment (all in one session). He had no trouble with the pretest and showed confidence in his judgments during the experiment. His data showed clear constancy by this procedure. It would appear from his results that at least some 4-year olds possess a certain degree of size constancy. His error scores did not increase as the experiment progressed, as did the adults. His weighted and simple error scores are shown in Table 4.

6. Conclusions and Implications

The most important new finding in this work bears on the comparison of constancy behavior of two- and three-dimensional stimuli. The data here are quite consistent in showing that both for Simple Errors (here conceived as a measure of simple variability) and for Weighted Errors (here conceived as a score more heavily weighted for accuracy) there is less constancy for the two-dimensional slides than for the matching boxes. We must recognize a sequence effect which was here uncontrolled which may confound this finding as might the failure to control the sequence of administering the two standards within a given dimensional presentation. One is hard put to account for the significant differences between standards.

In this connection, it is interesting to note that the one child studied does not seem to show a trend in the same direction. One might wonder whether the Two-D versus Three-D effect will appear in different age level children--a question which is presently under test.*

Despite the lack of a sample of children (N=1) there are several factors worthy of observation. The child manifests constancy. His performance is in the same range as that of adults. The child's variability does not appear to be substantially different than the adult mean. Thus, under the present experimental conditions, children can show constancy behavior and the situation appears to be feasible for further use in studying children's size constancy behavior. We also see that the task of responding in a stable and consistent way to a demand for pointing at the "bigger" of two items is responded to consistently.

Our method of scoring needs closer examination and comparison with more traditional ways of dealing with these kinds of questions. Some early data in the report suggests that it is fairly sensitive. A more systematic comparison, however, must await the accumulation of further data.

The data from the three subjects on three consecutive days suggests that in adults the behavior is stable over a three day period and that three repeated exposures does not lead to any systematic decrease in variability or increase in accurady. However, one might expect such a decrease to appear only when there is unstable performance or lack of constancy to begin with. This latter observation, however, tends to cast doubt on the interpretation of the major finding which says that the differences between two- and three-dimensional stimuli are a function of the sequence effect--Two-D having always preceded the three-D.

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*Support from Boston University Graduate School will make possible some further data collection and evaluation beyond the normal expiration date of the present contract.

The foregoing must be recognized as highly tentative and as subject to much closer examination and re-evaluation with the accumulation of more data.

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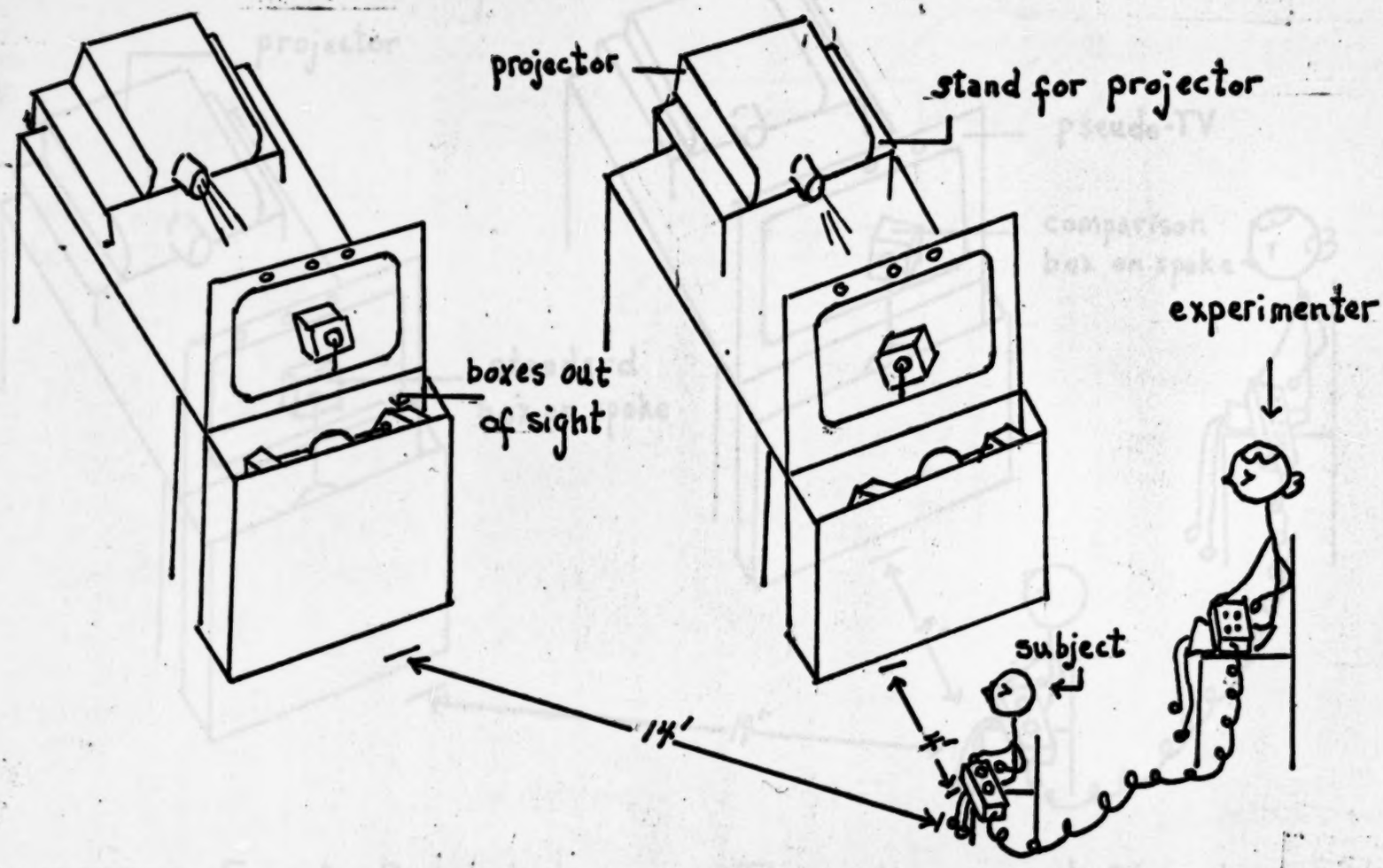

Fig. 1 Presentation of Two-dimensional Stimuli

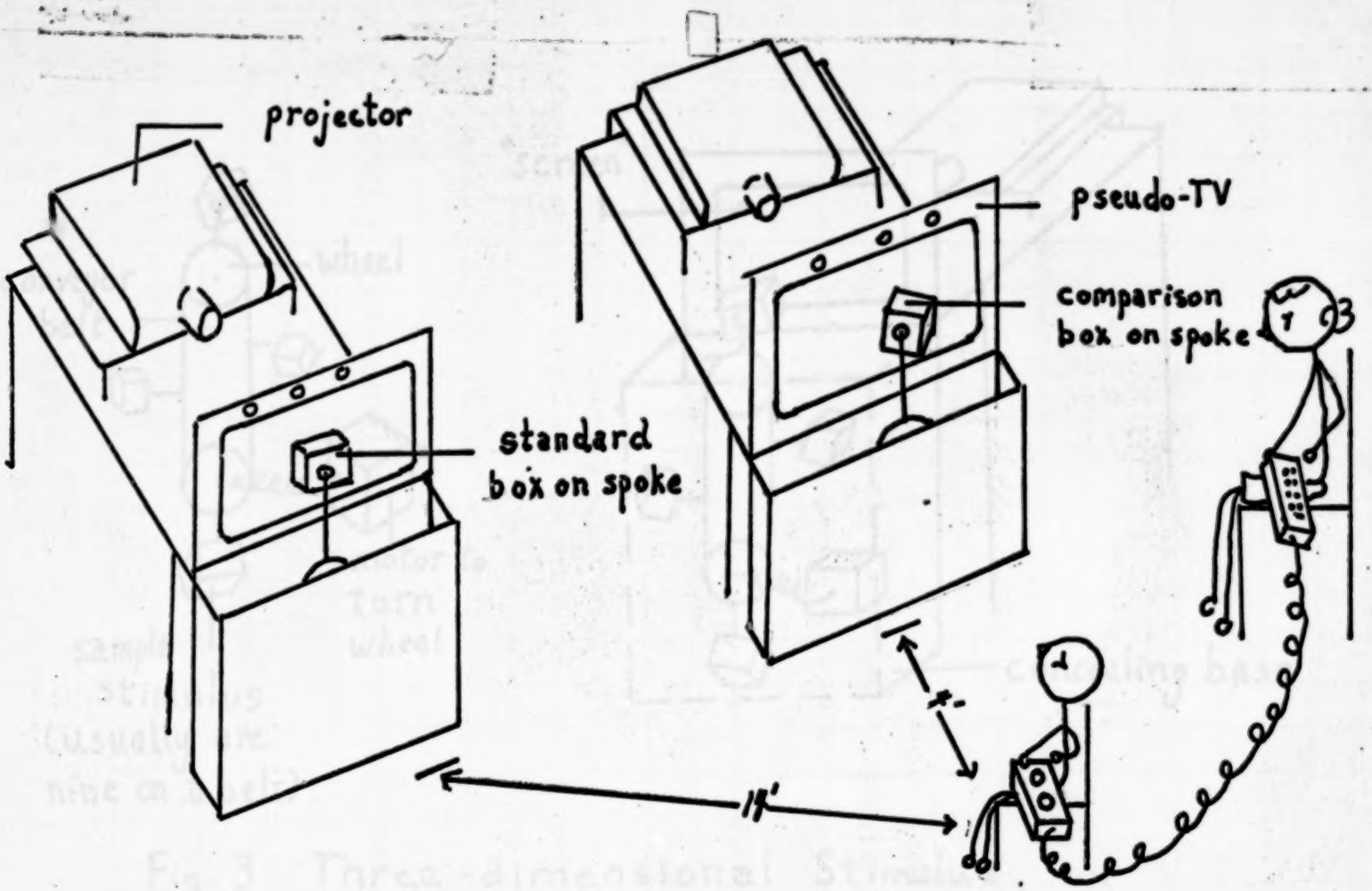

Fig. 2 Presentation of Three-dimensional Stimuli

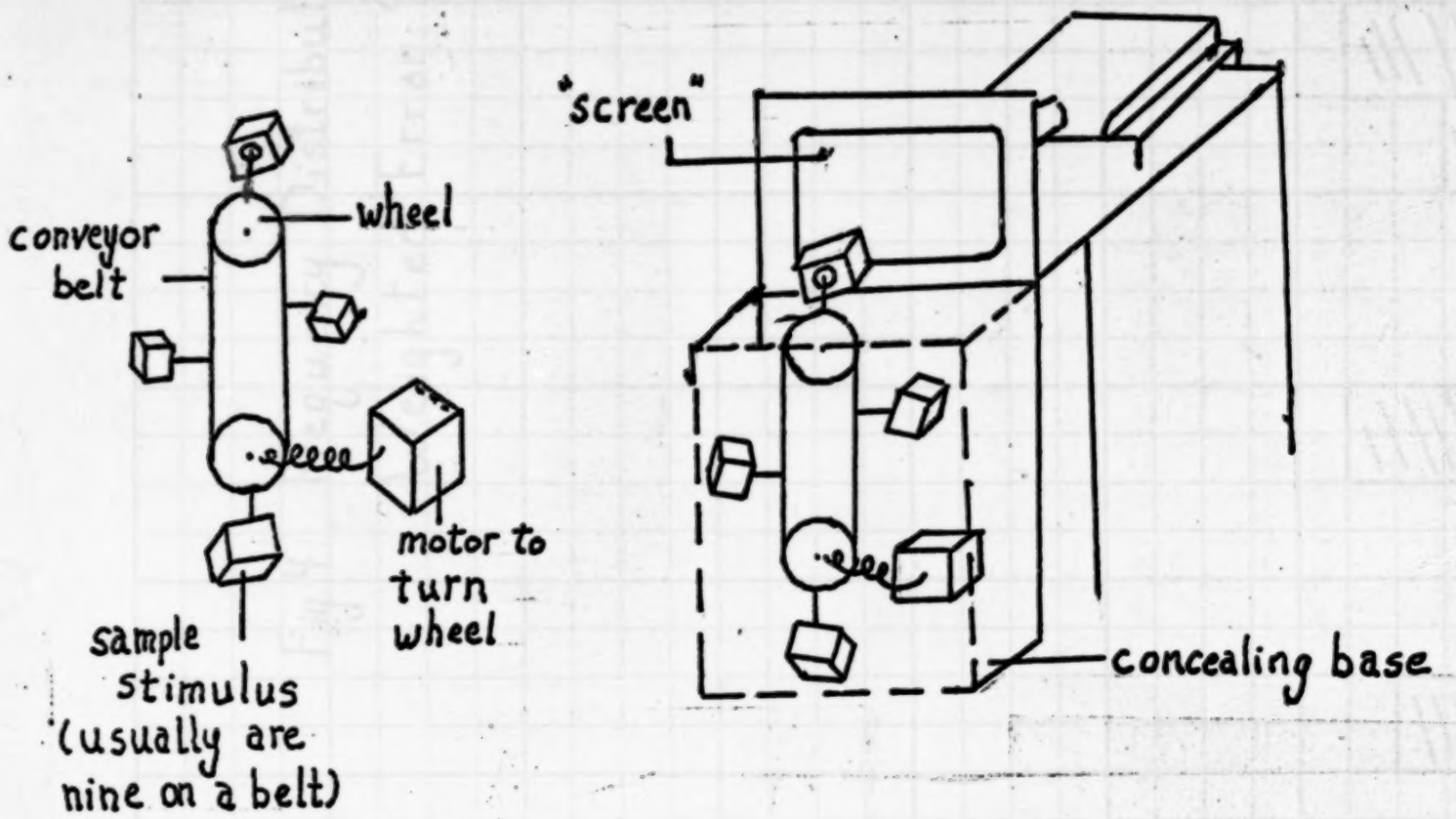

Fig. 3 Three-dimensional Stimulus Presentation Mechanism

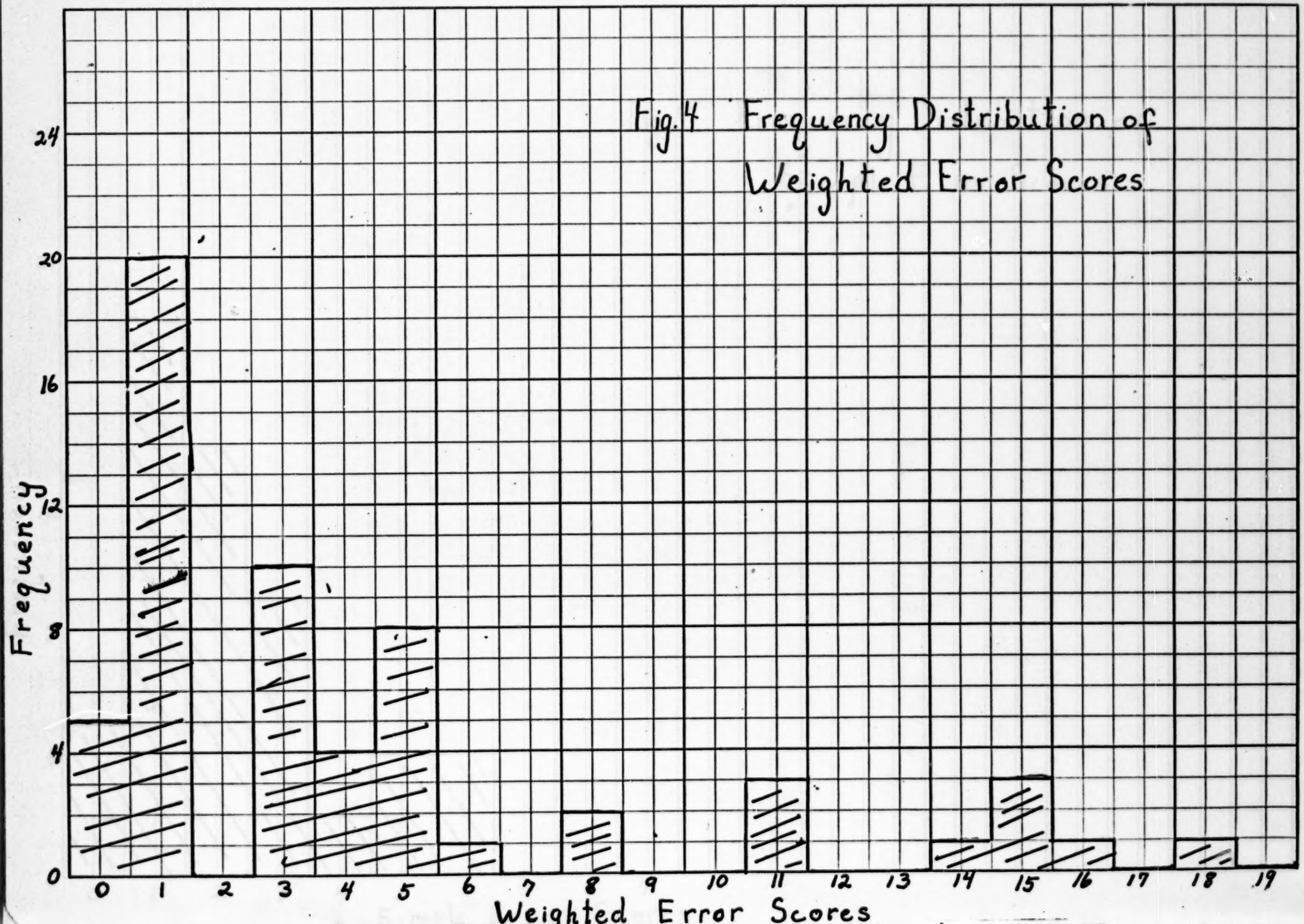
Fig. 4 Frequency Distribution of Weighted Error Scores
Frequency
0
4
8
12
16
20
24
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Weighted Error Scores

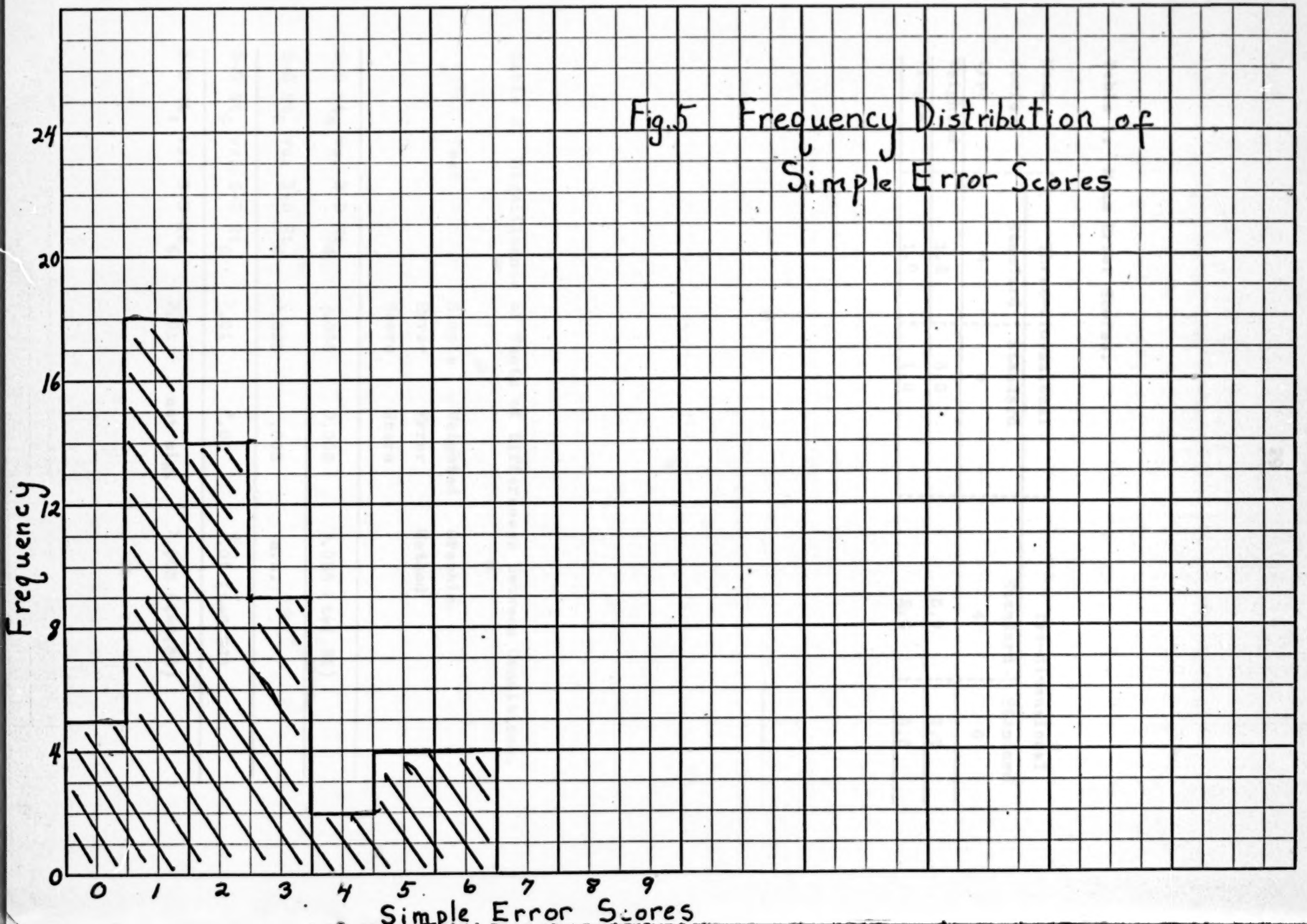
Fig. 5 Frequency Distribution of Simple Error Scores
Frequency
0
4
8
12
16
20
24
0 1 2 3 4 5 6 7 8 9
Simple Error Scores

Table 1. Mean Error Scores.

Mean score type	Three-dimensional		Two-dimensional	
	Standard 4	Standard 6	Standard 4	Standard 6
Weighted	1.2	3.0	5.0	7.7
Simple	1.0	1.9	2.4	3.6

Table 2. Significance of Tests of Differences between Conditions.

Test	Simple Error Score	Weighted Error Score	Graphic Method
2-D St_4 vs. 3-D St_4	>.005	>.005	>.025 (t=1.81)
2-D St_6 vs. 3-D St_6	>.025	.005	n.s.
2-D St_4 vs. 2-D St_6	>.01	>.05	>.01 (t=2.87)
3-D St_4 vs. 3-D St_6	>.01	not sig.	>.005 (t=5.50)

Table 3. Error Scores over Three Consecutive Days of Testing

a. Three-dimensional stimuli.

Subject	Type of Score	Day 1		Day 2		Day 3	
		St_4	St_6	St_4	St_6	St_4	St_6
A	weighted	1	3	1	3	1	1
	simple	1	2	1	2	1	1
B	weighted	0	1	3	1	1	0
	simple	0	1	2	1	1	0
C	weighted	1	1	0	1	1	1
	simple	1	1	0	1	1	1
Total	weighted	2	5	4	5	3	2
	simple	2	4	3	4	3	2

b. Two-dimensional stimuli.

Subject	Type of Score	Day 1		Day 2		Day 3	
		St_4	St_6	St_4	St_6	St_4	St_6
A	weighted	0	4	3	3	0	1
	simple	0	2	2	2	0	1
B	weighted	3	5	3	1	1	5
	simple	2	3	1	1	1	2
C	weighted	0	5	1	1	5	1
	simple	0	3	1	1	3	1
Total	weighted	3	14	7	5	6	7
	simple	2	8	4	4	4	4

Table 4. Four-year Old Boy's Error Scores.

Type of score	Three-dimensional stimuli		Two-dimensional stimuli	
	Standard 4	Standard 6	Standard 4	Standard 6
weighted	6	5	0	5
simple	3	2	0	2

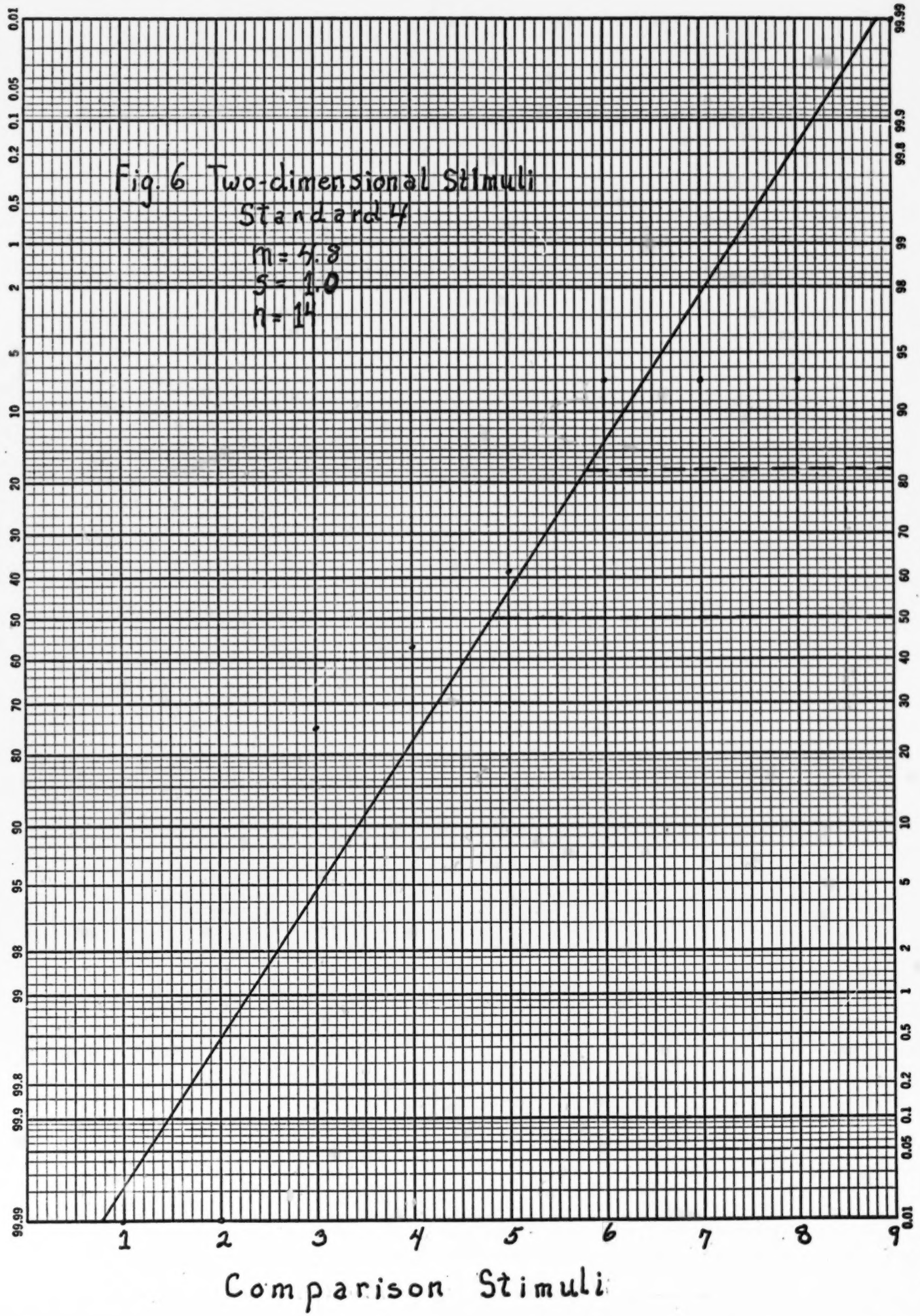

Fig. 6 Two-dimensional Stimuli

K&E PROBABILITY 46 8003
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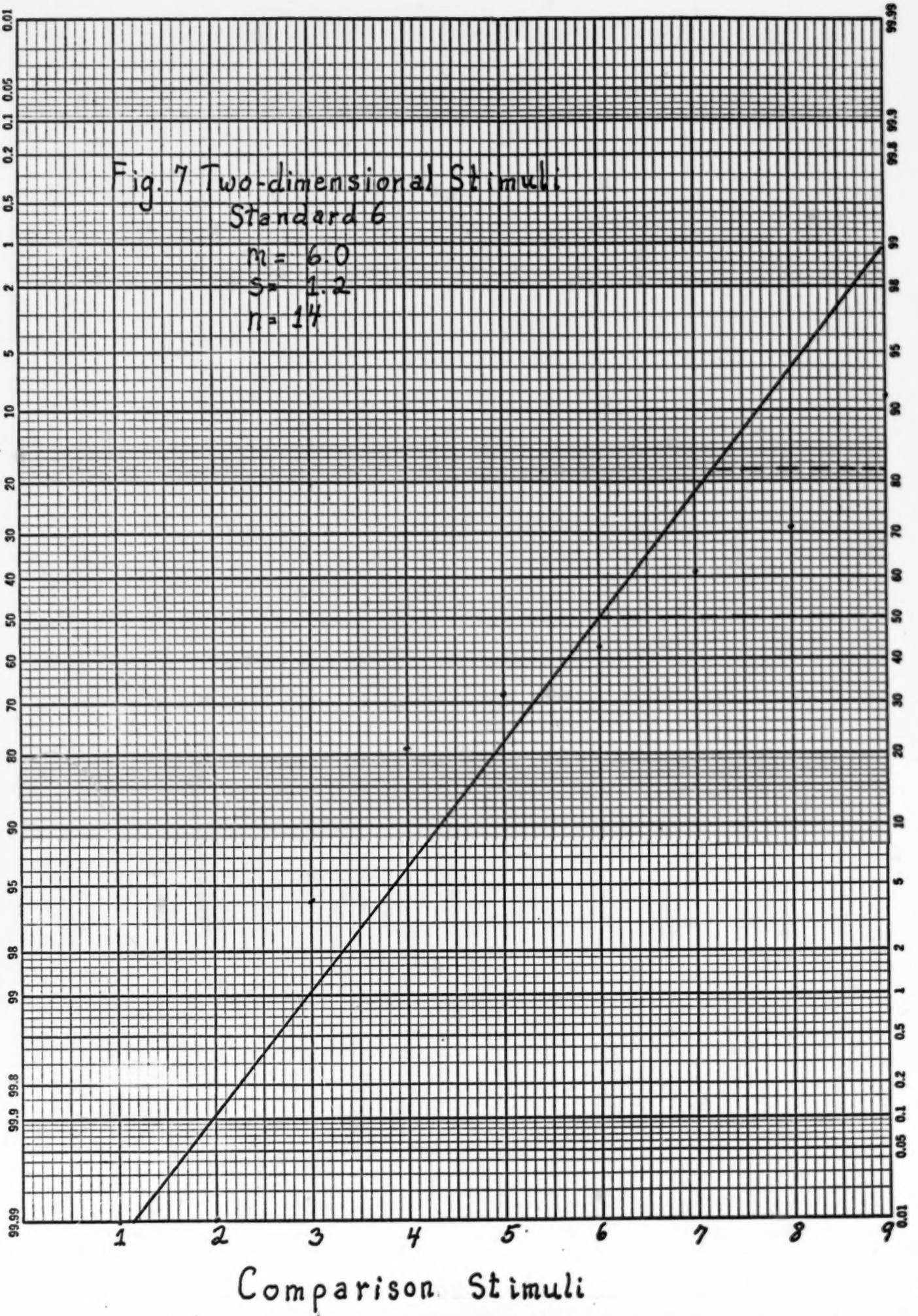
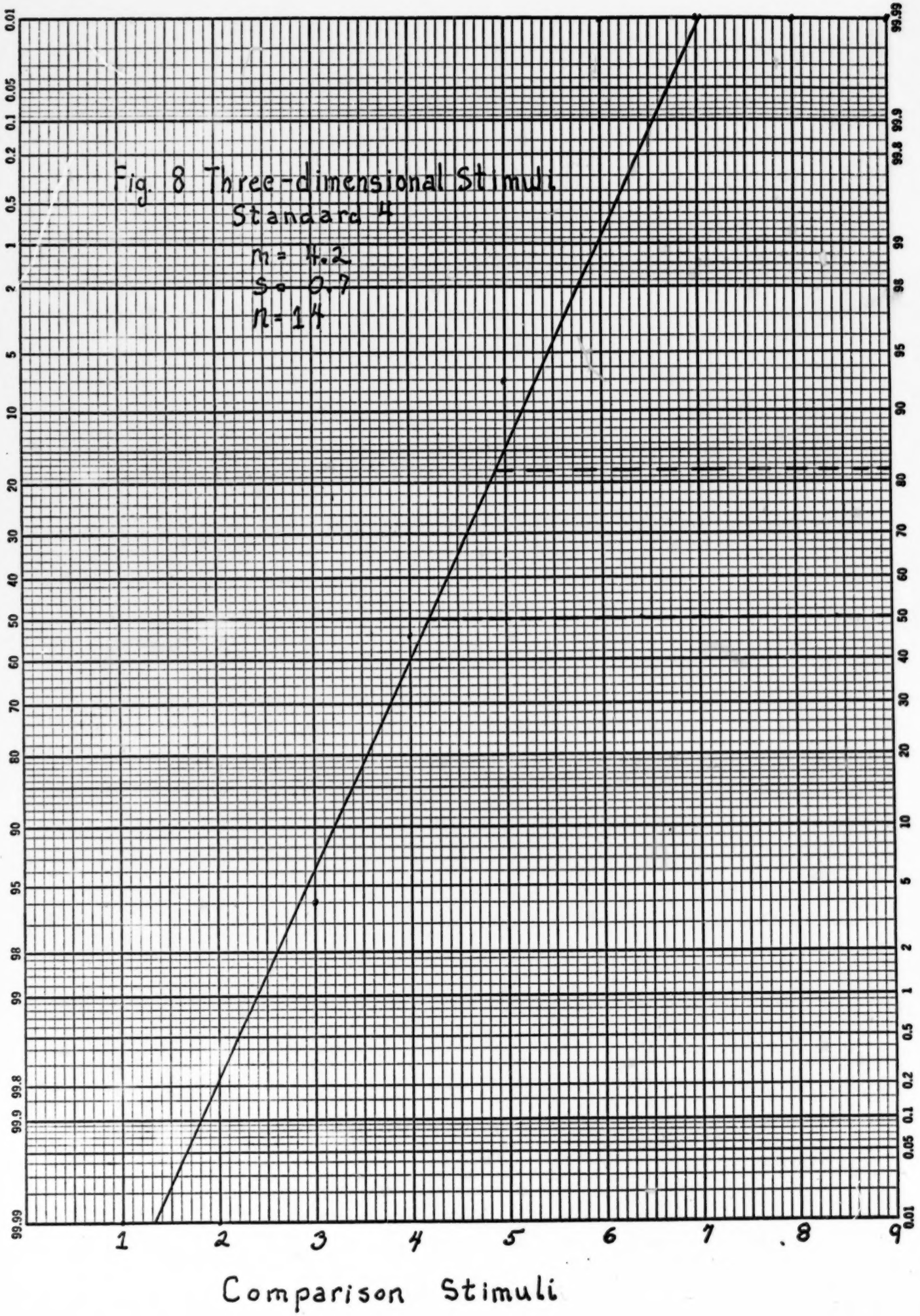
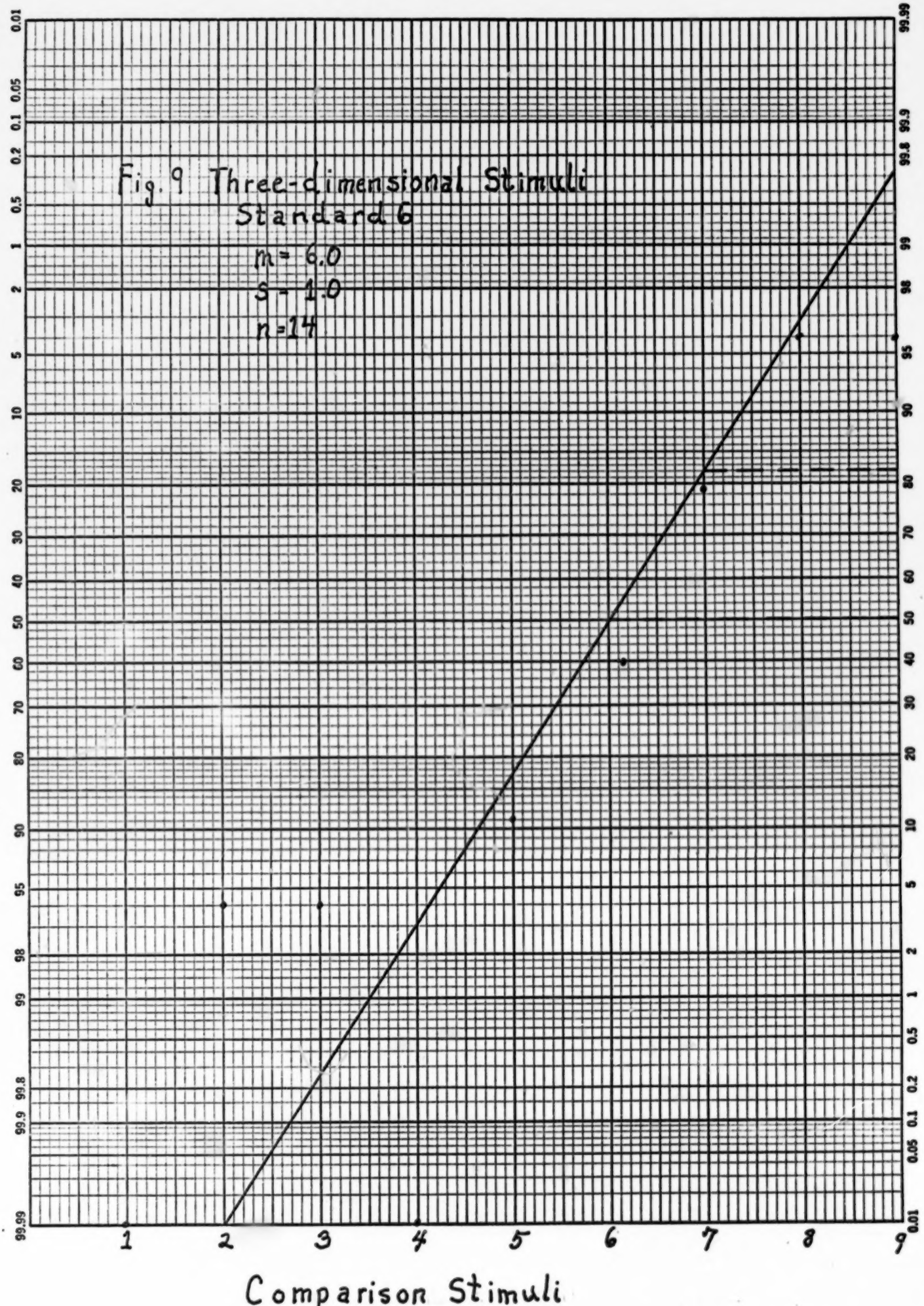


K+E PROBABILITY 46 8003
X 90 DIVISIONS
KEUFFEL & ESSER CO.



KEUFFEL & ESSER CO. PROBABILITY X 90 DIVISIONS 46 8003



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